

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-10, 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Underwood (1777509) in view of Hay (1947413).

Underwood discloses a method of reinforcing a monopole tower comprising forming a reinforcing column forming reinforcing material (concrete (10) to embed a vertical length of the tower (60 and its connecting parts), embedding a plurality of spaced apart tension cables (col 2 lines 45-46) into and extended vertically through the column, the tower comprising a metal tubular structure (60), forming the concrete reinforcement column comprising forming the column extending only partially (ending at 26) along the entire vertical length of the monopole tower, forming the concrete reinforcement column comprising forming the column extending the entire (ending at top, figure 1) vertical length of the monopole tower.

Underwood does not show the step of using a releasable mold, the step of releasing the mold from the reinforcement column, the step of applying/spraying a fluid reinforcing material to embed the tower, holding the fluid in place using a releasable mold along the length of the vertically disposed existing monopole tower until it solidifies to form the column, releasing the mold from the column, the mold being cylindrically shaped mold.

Hay shows the step of using a releasable mold, the step of releasing the mold from the reinforcement column, the step of applying a fluid reinforcing material to embed the tower, holding the fluid in place using a releasable mold along the length of the vertically disposed existing monopole tower until it solidifies to form the column, releasing the mold from the column, the mold being cylindrically shaped mold.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Underwood's structure to show the step of using a releasable mold, the step of releasing the mold from the reinforcement column, the step of applying/spraying a fluid reinforcing material to embed the tower, holding the fluid in place using a releasable mold along the length of the vertically disposed existing monopole tower until it solidifies to form the column, releasing the mold from the column as taught by Hay because it allows for the easy molding of a column reinforced by concrete, and the method step of spraying fluid concrete into a mold to form a structure is well known in the art and would have been obvious to one having ordinary skill in the art to utilize the method step.

2. Claims 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Underwood in view of Hay and Jacking as applied to claim 8 or 10 above and further in view of Norton et al (4452028).

Underwood shows all the claimed method steps except for the step of providing tensioners for tensioning the tension cables from the top of the column.

Norton et al discloses tensioners for tensioning the cables from the top of a structure.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Underwood's modified method step to show the step of providing tensioners

for tensioning the tension cables from the top of the column as taught by Norton et al because having tensioners would allow for the tensioning of the cables when needed, and having tensioned cables on a concrete column would reinforce the concrete better than non-tensioned cables.

3. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oliphant et al (5761875) in view of Hay (1947413).

Oliphant et al discloses a method of reinforcing a monopole tower having a vertical length comprising forming a reinforcing column including applying a fluid (concrete) reinforcing material to embed the entire vertical length of the tower, holding the fluid reinforcing material in place along the vertical length of the tower until it solidifies to form the column having the length of tower embedded therein.

Oliphant does not show the step of using a releasable mold, the step of releasing the mold from the reinforcement column.

Hay shows the step of using a releasable mold, the step of releasing the mold from the reinforcement column.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Oliphant et al's structure to show step of using a releasable mold, the step of releasing the mold from the reinforcement column as taught by Hay because it allows for the easy molding of a column reinforced by concrete.

Oliphant as modified shows all the claimed method steps.

Response to Arguments

2. Applicant's arguments with respect to claims 1,3-11,13,30-35,40 have been considered but are moot in view of the new ground(s) of rejection.
3. Per claim 40, Oliphant as modified by Hay shows all the claimed method steps. In response to applicant's argument that Hay or Oliphant is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the references are in the field of applicant's endeavor. The references relates to a method of reinforcing a vertically extending pole/shaft/column as applicant's invention. It is thus analogous. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine is provided by the references themselves. Modifying Oliphant with Hay, provides for an easy method of forming a reinforced monopole tower. The combination is thus desired.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different column reinforcing designs.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 571-272-6864. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Richard E. Chilcot/
Supervisory Patent Examiner, Art Unit 3635

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